

## WEST Search History





DATE: Tuesday, August 30, 2005

Hide?	<u>Set</u> <u>Name</u>	<u>Query</u>	<u>Hit</u> <u>Count</u>
		<i>DB=USOC; PLUR=YES; OP=ADJ</i>	
<input type="checkbox"/>	L8	(510/175 or 510/257).ccls. and ((hydrogen adj fluoride) with (ammonium adj fluoride) with (deionized water))	0
		<i>DB=PGPB,USPT; PLUR=YES; OP=ADJ</i>	
<input type="checkbox"/>	L7	(510/175 or 510/257).ccls. and ((hydrogen adj fluoride) with (ammonium adj fluoride) with (deionized water))	3
		<i>DB=USPT; PLUR=YES; OP=ADJ</i>	
<input type="checkbox"/>	L6	(510/175 or 510/257).ccls. and ((hydrogen adj fluoride) with (ammonium adj fluoride) with (deionized water))	2
		<i>DB=PGPB,USPT; PLUR=YES; OP=ADJ</i>	
<input type="checkbox"/>	L5	decap adj process	2
		<i>DB=USPT; PLUR=YES; OP=ADJ</i>	
<input type="checkbox"/>	L4	decap adj process	0
<input type="checkbox"/>	L3	decap adj2 process	0
<input type="checkbox"/>	L2	decap\$ and 134/\$.ccls.	12
<input type="checkbox"/>	L1	6517738.pn.	1

END OF SEARCH HISTORY

## WEST Search History

DATE: Tuesday, August 30, 2005

<b>Hide?</b>	<b>Set Name</b>	<b>Query</b>	<b>Hit Count</b>
	<i>DB=JPAB; PLUR=YES; OP=ADJ</i>		
<input type="checkbox"/>	L11	JP-2001131783-A.did.	1
<input type="checkbox"/>	L10	JP-2001131783-A.did.	1
<input type="checkbox"/>	L9	JP-2001131783-A.did.	1
<input type="checkbox"/>	L8	JP-3074346-B1.did.	0
	<i>DB=USPT; PLUR=YES; OP=ADJ</i>		
<input type="checkbox"/>	L7	US-6479443-B1.did.	1
<input type="checkbox"/>	L6	US-6479443-B1.did.	1
	<i>DB=EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=ADJ</i>		
<input type="checkbox"/>	L5	(hydrogen fluoride) same (ammonium fluoride) same (deionized water)	2
<input type="checkbox"/>	L4	L3	0
	<i>DB=PGPB,USPT; PLUR=YES; OP=ADJ</i>		
<input type="checkbox"/>	L3	(hydrogen fluoride) same (ammonium fluoride) same (deionized water)	23
<input type="checkbox"/>	L2	L1	23
	<i>DB=PGPB,USPT,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=ADJ</i>		
<input type="checkbox"/>	L1	(hydrogen fluoride) same (ammonium fluoride) same (deionized water)	25

END OF SEARCH HISTORY

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**Search Results - Record(s) 1 through 10 of 23 returned.**☐ 1. Document ID: US 20050081883 A1**Using default format because multiple data bases are involved.**

L3: Entry 1 of 23

File: PGPB

Apr 21, 2005

PGPUB-DOCUMENT-NUMBER: 20050081883

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20050081883 A1

TITLE: Etching composition, method of preparing the same, method of etching an oxide film, and method of manufacturing a semiconductor device

PUBLICATION-DATE: April 21, 2005

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Ko, Yong-Kyun	Gyeonggi-do		KR	
Chon, Sang-Mun	Gyeonggi-do		KR	
Doh, In-Hoi	Gyeonggi-do		KR	
Jun, Pil-Kwon	Gyeonggi-do		KR	
Lee, Sang-Mi	Gyeonggi-do		KR	
Lim, Kwang-shin	Gyeonggi-do		KR	
Han, Myoung-Ok	Gyeonggi-do		KR	

US-CL-CURRENT: 134/1.3; 510/175

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw De
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☐ 2. Document ID: US 20040224537 A1

L3: Entry 2 of 23

File: PGPB

Nov 11, 2004

PGPUB-DOCUMENT-NUMBER: 20040224537

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040224537 A1

TITLE: Spin-on glass composition and method of forming silicon oxide layer in semiconductor manufacturing process using the same

PUBLICATION-DATE: November 11, 2004

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Lee, Jung-Ho	Gyeonggi-do		KR	
Cho, Jun-Hyun	Suwon-si		KR	
Choi, Jung-Sik	Seoul		KR	
Lee, Dong-Jun	Suwon-si		KR	

US-CL-CURRENT: 438/782; 257/E21.243, 257/E21.263, 257/E21.279, 257/E21.548,  
257/E21.645, 427/240, 438/760, 438/790, 528/10

## ABSTRACT:

A spin-on glass (SOG) composition and a method of forming a silicon oxide layer utilizing the SOG composition are disclosed. The method includes coating on a semiconductor substrate having a surface discontinuity, an SOG composition containing polysilazane having a compound of the formula --(SiH.sub.2NH).sub.n-- wherein n represents a positive integer, a weight average molecular weight within the range of about 3,300 to 3,700 to form a planar SOG layer. The SOG layer is converted to a silicon oxide layer with a planar surface by curing the SOG layer. Also disclosed is a semiconductor device made by the method.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw. De
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☐ 3. Document ID: US 20040216762 A1

L3: Entry 3 of 23

File: PGPB

Nov 4, 2004

PGPUB-DOCUMENT-NUMBER: 20040216762  
PGPUB-FILING-TYPE: new  
DOCUMENT-IDENTIFIER: US 20040216762 A1

TITLE: Method for polymer residue removal following metal etching

PUBLICATION-DATE: November 4, 2004

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Lo, Chi-Hsin	Hsin-Chu		TW	
Chen, Fei-Yun	Hsin-Chu		TW	

US-CL-CURRENT: 134/2; 134/29, 134/36, 257/E21.255, 257/E21.313

## ABSTRACT:

A method for removing polymer containing residues from a semiconductor wafer including metal containing features including providing a semiconductor wafer having a process surface including metal containing features said process surface at least partially covered with polymer containing residues; and, subjecting the semiconductor wafer to a series of cleaning steps including sequentially exposing the process surface to at least one primary solvent and at least one intermediate solvent the at least one intermediate solvent comprising an ammonium nitrate containing solution.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMHC	Draw De
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☐ 4. Document ID: US 20040171211 A1

L3: Entry 4 of 23

File: PGPB

Sep 2, 2004

PGPUB-DOCUMENT-NUMBER: 20040171211

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040171211 A1

TITLE: Method of forming a trench for use in manufacturing a semiconductor device

PUBLICATION-DATE: September 2, 2004

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Lee, Sung-Bae	Hwasung-City		KR	
Hah, Sang-Rok	Seoul		KR	
Son, Hong-Seong	Suwon-City		KR	

US-CL-CURRENT: 438/243; 257/E21.548, 257/E21.549, 438/387

## ABSTRACT:

A method for use in manufacturing a semiconductor device includes forming a photoresist pattern on a substrate, performing first etching process in which an initial trench is formed using the photoresist pattern as a mask, and performing second distinct etching process to enlarge the initial trench. Thus, the initial trench can be formed using the photoresist pattern having a stable structure. Thereafter, the trench is enlarged using an etching solution having a composition based on the material in which the initial trench is formed, e.g., a silicon substrate or an insulation film. Therefore, a metal wiring, an isolation film or a contact can be formed in the enlarged trench to desired dimensions.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMHC	Draw De
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☐ 5. Document ID: US 20040129361 A1

L3: Entry 5 of 23

File: PGPB

Jul 8, 2004

PGPUB-DOCUMENT-NUMBER: 20040129361

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040129361 A1

TITLE: Method of etching a magnetic material

PUBLICATION-DATE: July 8, 2004

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
------	------	-------	---------	---------

Chen, Xiaoyi	Foster City	CA	US
Ying, Chentsau	Cupertino	CA	US
Nallan, Padmapani C.	San Jose	CA	US
Kumar, Ajay	Sunnyvale	CA	US

US-CL-CURRENT: 156/58; 216/22

## ABSTRACT:

A method of patterning a layer of magnetic material to form isolated magnetic regions. The method forms a mask on a film stack comprising a layer of magnetic material such that the protected and unprotected regions are defined. The unprotected regions are etched in a high temperature environment to form isolated magnetic regions.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw De
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☐ 6. Document ID: US 20040043526 A1

L3: Entry 6 of 23

File: PGPB

Mar 4, 2004

PGPUB-DOCUMENT-NUMBER: 20040043526

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040043526 A1

TITLE: Method of patterning a layer of magnetic material

PUBLICATION-DATE: March 4, 2004

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Ying, Chentsau	Cupertino	CA	US	
Chen, Xiaoyi	Foster City	CA	US	
Nallan, Padmapani C.	San Jose	CA	US	
Kumar, Ajay	Sunnyvale	CA	US	

US-CL-CURRENT: 438/38; 257/E21.252, 257/E21.282, 257/E21.311, 257/E21.313, 257/E21.314

## ABSTRACT:

A method of patterning a layer of magnetic material to form isolated magnetic regions. The method forms a mask on a film stack comprising a layer of magnetic material such the protected and unprotected regions are defined. The unprotected regions are oxidized to form isolated magnetic regions.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw De
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☐ 7. Document ID: US 20040029393 A1

L3: Entry 7 of 23

File: PGPB

Feb 12, 2004

PGPUB-DOCUMENT-NUMBER: 20040029393  
PGPUB-FILING-TYPE: new  
DOCUMENT-IDENTIFIER: US 20040029393 A1

TITLE: Method for removal of residue from a magneto-resistive random access memory (MRAM) film stack using a sacrificial mask layer

PUBLICATION-DATE: February 12, 2004

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Ying, Chentsau	Cupertino	CA	US	
Chen, Xiaoyi	Foster City	CA	US	
Nallan, Padmapani C.	San Jose	CA	US	
Kumar, Ajay	Sunnyvale	CA	US	

US-CL-CURRENT: 438/745; 257/E21.311, 257/E21.313, 257/E21.314

## ABSTRACT:

A method for removal of residues after plasma etching a film stack comprising a first layer and a sacrificial layer. The method treats a substrate containing the film stack after the first layer of the film stack has been etched to remove residue produced during the etching process. The treatment is performed in a buffered oxide etch wet dip solution that removes the residue and the sacrificial layer.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. De
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☐ 8. Document ID: US 20040026369 A1

L3: Entry 8 of 23

File: PGPB

Feb 12, 2004

PGPUB-DOCUMENT-NUMBER: 20040026369  
PGPUB-FILING-TYPE: new  
DOCUMENT-IDENTIFIER: US 20040026369 A1

TITLE: Method of etching magnetic materials

PUBLICATION-DATE: February 12, 2004

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Ying, Chentsau	Cupertino	CA	US	
Chen, Xiaoyi	Foster City	CA	US	
Nallan, Padmapani C.	San Jose	CA	US	
Kumar, Ajay	Sunnyvale	CA	US	

US-CL-CURRENT: 216/63

## ABSTRACT:

A method of etching a layer of magnetic material using a hard mask and an etchant comprising BCl<sub>3</sub>. The method finds use in etching magnetic materials during fabrication of magneto-resistive random access memory (MRAM) devices.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. De
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☐ 9. Document ID: US 20040018738 A1

L3: Entry 9 of 23

File: PGPB

Jan 29, 2004

PGPUB-DOCUMENT-NUMBER: 20040018738

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040018738 A1

TITLE: Method for fabricating a notch gate structure of a field effect transistor

PUBLICATION-DATE: January 29, 2004

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Liu, Wei	San Jose	CA	US	

US-CL-CURRENT: 438/700; 257/E21.038, 257/E21.205, 257/E21.206, 257/E21.434,  
257/E21.444, 438/701, 438/702, 438/703

## ABSTRACT:

A method for fabricating features on a substrate having reduced dimensions is provided. The features are formed by defining a first mask through one or more layers of a multilayer stack formed on a substrate. The first mask is defined using lithographic techniques. A second mask is then conformably formed on one or more sidewalls of the first mask. Using the second mask as an etch mask, the remaining layers of the multilayer stack are etched to the substrate surface forming an opening in the multilayer stack. The features are completed by filling the opening with one or more material layers followed by removal of the multilayer stack.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. De
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☐ 10. Document ID: US 20030219912 A1

L3: Entry 10 of 23

File: PGPB

Nov 27, 2003

PGPUB-DOCUMENT-NUMBER: 20030219912

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030219912 A1



TITLE: Method for removal of metallic residue after plasma etching of a metal layer

PUBLICATION-DATE: November 27, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Chen, Xiaoyi	Foster City	CA	US	
Ying, Chentsau	Cupertino	CA	US	
Nallan, Padmapani C.	San Jose	CA	US	
Kumar, Ajay	Sunnyvale	CA	US	
Kerns, Ralph C.	San Carlos	CA	US	
Rui, Ying	Sunnyvale	CA	US	
Yan, Chun	San Jose	CA	US	
Ding, Guowen	Sunnyvale	CA	US	
Yau, Wai-Fan	Los Altos	CA	US	

US-CL-CURRENT: [438/3](#); [257/E21.256](#), [257/E21.313](#), [438/754](#)

ABSTRACT:

A method for removal of metallic residue from a substrate after a plasma etch process in a semiconductor substrate processing system by cleaning the substrate in a hydrogen fluoride solution.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Drawings
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Clear	Generate Collection	Print	Fwd Refs	Bkwd Refs	Generate OACS
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Term	Documents
HYDROGEN	562507
HYDROGENS	17189
FLUORIDE	136265
FLUORIDES	18379
AMMONIUM	328622
AMMONIUMS	1073
AMMONIA	167932
AMMONIAS	169
DEIONIZED	88021
DEIONISED	4273
WATER	1345970
((HYDROGEN FLUORIDE) SAME (AMMONIUM FLUORIDE) SAME (DEIONIZED WATER)).PGPB,USPT.	23

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L3: Entry 13 of 23

File: PGPB

May 9, 2002

DOCUMENT-IDENTIFIER: US 20020055271 A1

TITLE: Method of forming silicon oxide layer in semiconductor manufacturing process using spin-on glass composition and isolation method using the same method

Detail Description Paragraph:

[0137] Etching rates of silicon oxide layers formed by converting the SOG manufactured by Experiments 2-4 and a silicon oxide layer manufactured by a high density plasma method were detected according to the kind of etching solutions used. Wet etching was implemented for a constant time period using the same etching solution and the etching rate was detected with a constant time interval. As for the etching solution, SC-1 solution (a mixture of ammonia, hydrogen peroxide and deionized water), LAL solution (a mixture of ammonium fluoride and hydrogen fluoride) and phosphoric acid were applied. The result is illustrated in FIG. 9 as a graph. In FIG. 9, the axis of ordinate represents the etching rate, and the axis of abscissa represents the etching solutions and the kind of the etched oxides.

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L3: Entry 13 of 23

File: PGPB

May 9, 2002

PGPUB-DOCUMENT-NUMBER: 20020055271

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020055271 A1

TITLE: Method of forming silicon oxide layer in semiconductor manufacturing process using spin-on glass composition and isolation method using the same method

PUBLICATION-DATE: May 9, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Lee, Jung-Ho	Suwon-si		KR	
Lee, Dong-Jun	Yongin-si		KR	
Kang, Dae-Won	Seongnam-si		KR	
Moon, Sung-Taek	Suwon-si		KR	
Lee, Gi-Hag	Seoul		KR	
Choi, Jung-Sik	Seongnam-si		KR	

APPL-NO: 09/ 985615 [PALM]

DATE FILED: November 5, 2001

## RELATED-US-APPL-DATA:

Application 09/985615 is a continuation-in-part-of US application 09/686624, filed October 12, 2000, PENDING

## FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	DOC-ID	APPL-DATE
KR	2001-31633	2001KR-2001-31633	June 7, 2001

INT-CL: [07] H01 L 21/31

US-CL-PUBLISHED: 438/782

US-CL-CURRENT: 438/782; 257/E21.243, 257/E21.263, 257/E21.271, 257/E21.279, 257/E21.548, 257/E21.628

REPRESENTATIVE-FIGURES: 3K

## ABSTRACT:

A method of forming a silicon oxide layer of a semiconductor device comprising coating a spin-on glass (SOG) composition including perhydropolysilazane having a compound of the formula  $(\text{SiH}_{2n}\text{NH}_2)_{2n}$  where n represents a positive integer on a semiconductor substrate having a surface discontinuity, to form a planar SOG layer; and forming a silicon oxide layer with a planar surface by implementing a first heat treatment to convert an SOG solution into oxide and a

second heat treatment to densify thus obtained oxide. The silicon oxide layer of the present invention can bury a gap between gaps of VLSI having a high aspect ratio and gives the same characteristics as a CVD oxide layer. Further, the oxidation of silicon in the active region is restrained in the present invention to secure dimension stability. Also disclosed is a semiconductor device made by the method.

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☐ 11. Document ID: US 20030185690 A1

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L3: Entry 11 of 23

File: PGPB

Oct 2, 2003

PGPUB-DOCUMENT-NUMBER: 20030185690

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030185690 A1

TITLE: Systems and methods for transferring and delivering a liquid chemical from a source to an end use station

PUBLICATION-DATE: October 2, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Xu, Mindi	Naperville	IL	US	
Chang, Shei-Kai	Darien	IL	US	
Vigor, Xavier	Paris		FR	

US-CL-CURRENT: [417/393](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw. De
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☐ 12. Document ID: US 20030171239 A1

L3: Entry 12 of 23

File: PGPB

Sep 11, 2003

PGPUB-DOCUMENT-NUMBER: 20030171239

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030171239 A1

TITLE: Methods and compositions for chemically treating a substrate using foam technology

PUBLICATION-DATE: September 11, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Patel, Bakul P.	Pleasanton	CA	US	
Cernat, Mihaela Anca-Mac	Brentwood	CA	US	
Small, Robert J.	Dublin	CA	US	

US-CL-CURRENT: [510/406](#); [510/411](#), [510/412](#), [510/499](#)

## ABSTRACT:

The present invention relates to methods and compositions for treating a surface of a substrate by foam technology that includes at least one treatment chemical. The invention more particularly relates to the removal of undesired matter from the surface of substrates with small features, where such undesired matter may comprise organic and inorganic compounds such as particles, films from photoresist material, and traces of any other impurities such as metals deposited during planarization or etching. A method according to the present invention for treating a surface of a substrate comprises generating a foam from a liquid composition, wherein the liquid composition comprises a gas; a surfactant; and at least one component selected from the group consisting of a fluoride, a hydroxylamine, an amine and periodic acid; contacting the foam with the surface of a substrate; and, removing the undesired matter from the surface of the substrate.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. De
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☐ 13. Document ID: US 20020055271 A1

L3: Entry 13 of 23

File: PGPB

May 9, 2002

PGPUB-DOCUMENT-NUMBER: 20020055271

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020055271 A1

TITLE: Method of forming silicon oxide layer in semiconductor manufacturing process using spin-on glass composition and isolation method using the same method

PUBLICATION-DATE: May 9, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Lee, Jung-Ho	Suwon-si		KR	
Lee, Dong-Jun	Yongin-si		KR	
Kang, Dae-Won	Seongnam-si		KR	
Moon, Sung-Taek	Suwon-si		KR	
Lee, Gi-Hag	Seoul		KR	
Choi, Jung-Sik	Seongnam-si		KR	

US-CL-CURRENT: [438/782](#); [257/E21.243](#), [257/E21.263](#), [257/E21.271](#), [257/E21.279](#),  
[257/E21.548](#), [257/E21.628](#)

## ABSTRACT:

A method of forming a silicon oxide layer of a semiconductor device comprising coating a spin-on glass (SOG) composition including perhydropolysilazane having a compound of the formula  $(\text{SiH}_{2.2}\text{NH}_{2.2})_{0.2n}$  where n represents a positive integer on a semiconductor substrate having a surface discontinuity, to form a planar SOG layer; and forming a silicon oxide layer with a planar surface by implementing a first heat treatment to convert an SOG solution into oxide and a second heat treatment to densify thus obtained oxide. The silicon oxide layer of

the present invention can bury a gap between gaps of VLSI having a high aspect ratio and gives the same characteristics as a CVD oxide layer. Further, the oxidation of silicon in the active region is restrained in the present invention to secure dimension stability. Also disclosed is a semiconductor device made by the method.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. De
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☐ 14. Document ID: US 20020027084 A1

L3: Entry 14 of 23

File: PGPB

Mar 7, 2002

PGPUB-DOCUMENT-NUMBER: 20020027084

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020027084 A1

TITLE: Wet process for semiconductor device fabrication using anode water containing oxidative substances and cathode water containing reductive substances, and anode water and cathode water used in the wet process

PUBLICATION-DATE: March 7, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Park, Im-Soo	Seoul		KR	
Lee, Kun-Tack	Suwon-city		KR	
Kwon, Young-Min	Suwon-city		KR	
Hah, Sang-Rok	Seoul		KR	
Shim, Woo-Gwan	Seoul		KR	
Ko, Hyung-Ho	Seoul		KR	

US-CL-CURRENT: 205/464

ABSTRACT:

A wet process performed in the manufacture of semiconductor devices with cathode water and anode water produced from electrolyte using a 3-cell electrolyzer having an intermediate cell for the electrolyte. The 3-cell electrolyzer includes an anode cell, a cathode cell, and an intermediate cell between the anode and cathode cells, which are partitioned by ion exchange membranes. Deionized water is supplied into the anode and cathode cells, and the intermediate cell is filled with an electrolytic aqueous solution to perform electrolysis. The anode water containing oxidative substances or the cathode water containing reductive substances, which are produced by the electrolysis process, are used in the wet process.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. De
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☐ 15. Document ID: US 6759263 B2

L3: Entry 15 of 23

File: USPT

Jul 6, 2004



US-PAT-NO: 6759263

DOCUMENT-IDENTIFIER: US 6759263 B2

TITLE: Method of patterning a layer of magnetic material

DATE-ISSUED: July 6, 2004

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ying; Chentsau	Cupertino	CA	95014	
Chen; Xiaoyi	Foster City	CA	94404	
Nallan; Padmapani C.	San Jose	CA	95148	
Kumar; Ajay	Sunnyvale	CA	94087	

US-CL-CURRENT: 438/48; 257/E21.252, 257/E21.282, 257/E21.311, 257/E21.313,  
257/E21.314, 438/551, 438/911

## ABSTRACT:

A method of patterning a layer of magnetic material to form isolated magnetic regions. The method forms a mask on a film stack comprising a layer of magnetic material such the protected and unprotected regions are defined. The unprotected regions are oxidized to form isolated magnetic regions.

24 Claims, 19 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 12

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWC	Draw De
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☐ 16. Document ID: US 6565736 B2

L3: Entry 16 of 23

File: USPT

May 20, 2003

US-PAT-NO: 6565736

DOCUMENT-IDENTIFIER: US 6565736 B2

TITLE: WET PROCESS FOR SEMICONDUCTOR DEVICE FABRICATION USING ANODE WATER  
CONTAINING OXIDATIVE SUBSTANCES AND CATHODE WATER CONTAINING REDUCTIVE SUBSTANCES,  
AND ANODE WATER AND CATHODE WATER USED IN THE WET PROCESS

DATE-ISSUED: May 20, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Park; Im-soo	Seoul			KR
Lee; Kun-tack	Suwon			KR
Kwon; Young-min	Suwon			KR
Hah; Sang-rok	Seoul			KR
Shim; Woo-gwan	Seoul			KR
Ko; Hyung-ho	Seoul			KR

US-CL-CURRENT: 205/746; 134/1.3, 205/748

## ABSTRACT:

A wet process performed in the manufacture of semiconductor devices with cathode water and anode water produced from electrolyte using a 3-cell electrolyzer having an intermediate cell for the electrolyte. The 3-cell electrolyzer includes an anode cell, a cathode cell, and an intermediate cell between the anode and cathode cells, which are partitioned by ion exchange membranes. Deionized water is supplied into the anode and cathode cells, and the intermediate cell is filled with an electrolytic aqueous solution to perform electrolysis. The anode water containing oxidative substances or the cathode water containing reductive substances, which are produced by the electrolysis process, are used in the wet process.

23 Claims, 19 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 11

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw De
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☐ 17. Document ID: US 6479443 B1

L3: Entry 17 of 23

File: USPT

Nov 12, 2002

US-PAT-NO: 6479443

DOCUMENT-IDENTIFIER: US 6479443 B1

TITLE: Cleaning solution and method for cleaning semiconductor substrates after polishing of copper film

DATE-ISSUED: November 12, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Zhang; Liming	Sunnyvale	CA		
Zhao; Yuexing	San Jose	CA		
Hymes; Diane J.	San Jose	CA		
Krusell; Wilbur C.	Incline Village	NV		

US-CL-CURRENT: 510/175; 134/2, 134/3, 257/E21.226, 257/E21.304, 438/690, 438/691, 510/176

## ABSTRACT:

A cleaning solution for cleaning a semiconductor substrate is formed by mixing an amount of citric acid, an amount of ammonium fluoride, and an amount of hydrogen fluoride in deionized water. In one embodiment, the amount of citric acid is in a range from about 0.09% by weight to about 0.11% by weight, the amount of ammonium fluoride is in a range from about 0.4% by weight to about 0.6% by weight, the amount of hydrogen fluoride is in a range from about 0.09% by weight to about 0.11% by weight, and the cleaning solution has a pH of about 4. A method for cleaning a semiconductor substrate having a polished copper layer in which a concentrated cleaning solution is mixed with deionized water proximate to a scrubbing apparatus

also is described.

5 Claims, 7 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 4

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	K/M/C	Draw D
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☐ 18. Document ID: US 6479405 B2

L3: Entry 18 of 23

File: USPT

Nov 12, 2002

US-PAT-NO: 6479405

DOCUMENT-IDENTIFIER: US 6479405 B2

TITLE: Method of forming silicon oxide layer in semiconductor manufacturing process using spin-on glass composition and isolation method using the same method

DATE-ISSUED: November 12, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Lee; Jung-Ho	Gyeonggi-do			KR
Lee; Dong-Jun	Gyeonggi-do			KR
Kang; Dae-Won	Gyeonggi-do			KR
Moon; Sung-Taek	Gyeonggi-do			KR
Lee; Gi-Hag	Seoul			KR
Choi; Jung-Sik	Gyeonggi-do			KR

US-CL-CURRENT: 438/782; 257/E21.243, 257/E21.263, 257/E21.271, 257/E21.279,  
257/E21.548, 257/E21.628; 438/359, 438/784, 438/787, 438/790

ABSTRACT:

A method of forming a silicon oxide layer of a semiconductor device comprising coating a spin-on glass (SOG) composition including perhydropolysilazane having a compound of the formula  $(\text{SiH}_{2.2}\text{NH}_{2.2})_{\text{sub.n}}$  where n represents a positive integer on a semiconductor substrate having a surface discontinuity, to form a planar SOG layer; and forming a silicon oxide layer with a planar surface by implementing a first heat treatment to convert an SOG solution into oxide and a second heat treatment to densify thus obtained oxide. The silicon oxide layer of the present invention can bury a gap between gaps of VLSI having a high aspect ratio and gives the same characteristics as a CVD oxide layer. Further, the oxidation of silicon in the active region is restrained in the present invention to secure dimension stability. Also disclosed is a semiconductor device made by the method.

14 Claims, 32 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 19

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw De
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☐ 19. Document ID: US 6277204 B1

L3: Entry 19 of 23

File: USPT

Aug 21, 2001

US-PAT-NO: 6277204

DOCUMENT-IDENTIFIER: US 6277204 B1

TITLE: Methods for cleaning wafers used in integrated circuit devices

DATE-ISSUED: August 21, 2001

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Chang; Kyu-hwan	Seoul			KR
Song; Jae-inh	Kyungki-do			KR
Park; Heung-soo	Seoul			KR
Koh; Young-bum	Seoul			KR

US-CL-CURRENT: 134/2; 134/21, 134/22.19, 134/25.4, 134/26, 134/28, 134/29, 134/3,  
134/30, 134/34, 134/36, 134/41, 134/42 , 134/902

## ABSTRACT:

Apparatuses for cleaning wafers used in integrated circuit devices comprise: (1) a dry cleaning section comprising inert gas storage bath, a hydrogen fluoride gas storage bath, and a vapor storage bath containing a component selected from the group consisting of water vapor, alcohol vapor, and mixtures thereof and a gas mixer, wherein the inert gas storage bath, the hydrogen fluoride gas storage bath, and the vapor storage bath are in communication with the gas mixer; (2) a wet cleaning section comprising a first bath for storing a fluoride; a second bath for storing a liquid alcohol; and a cleaning solution storage bath in communication with the first bath and second bath, wherein the fluoride and the liquid alcohol form a cleaning solution which is stored in the cleaning solution storage bath; and (3) a common cleaning bath positioned between and in communication with the dry cleaning section and the wet cleaning section.

8 Claims, 5 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 3

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw De
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☐ 20. Document ID: US 6162301 A

L3: Entry 20 of 23

File: USPT

Dec 19, 2000

US-PAT-NO: 6162301

DOCUMENT-IDENTIFIER: US 6162301 A

TITLE: Methods and apparatus for cleaning semiconductor substrates after polishing of copper film

DATE-ISSUED: December 19, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Zhang; Liming	Tucson	AZ		
Zhao; Yuexing	Santa Clara	CA		
Hymes; Diane J.	San Jose	CA		
Krusell; Wilbur C.	Palo Alto	CA		

US-CL-CURRENT: 134/3; 134/2, 257/E21.304, 438/690, 438/691, 510/175, 510/176

ABSTRACT:

A cleaning solution, method, and apparatus for cleaning semiconductor substrates after chemical mechanical polishing of copper films is described. The present invention includes a cleaning solution which combines deionized water, an organic compound, and a fluoride compound in an acidic pH environment for cleaning the surface of a semiconductor substrate after polishing a copper layer. Such methods of cleaning semiconductor substrates after copper CMP alleviate the problems associated with brush loading and surface and subsurface contamination.

15 Claims, 7 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 4

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Abstracts	Claims	KWIC	Draw. De
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Term	Documents
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HYDROGENS	17189
FLUORIDE	136265
FLUORIDES	18379
AMMONIUM	328622
AMMONIUMS	1073
AMMONIA	167932
AMMONIAS	169
DEIONIZED	88021
DEIONISED	4273
WATER	1345970
((HYDROGEN FLUORIDE) SAME (AMMONIUM FLUORIDE) SAME (DEIONIZED WATER)).PGPB,USPT.	23

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☐ 21. Document ID: US 5593538 A**Using default format because multiple data bases are involved.**

L3: Entry 21 of 23

File: USPT

Jan 14, 1997

US-PAT-NO: 5593538

DOCUMENT-IDENTIFIER: US 5593538 A

TITLE: Method for etching a dielectric layer on a semiconductor

DATE-ISSUED: January 14, 1997

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Davison; Michael J.	Mesa	AZ		
Dryer; Paul W.	Mesa	AZ		
Wilson; Wendy K.	Mesa	AZ		

US-CL-CURRENT: 438/747; 216/84, 216/90, 216/93, 257/E21.251, 438/750, 438/756

Full	Title	Citation	Front	Review	Classification	Date	Reference	References	Abstracts	Claims	KWC	Draw. De
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☐ 22. Document ID: US 5476816 A

L3: Entry 22 of 23

File: USPT

Dec 19, 1995

US-PAT-NO: 5476816

DOCUMENT-IDENTIFIER: US 5476816 A

TITLE: Process for etching an insulating layer after a metal etching step

DATE-ISSUED: December 19, 1995

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Mautz; Karl E.	Austin	TX		
Cadenhead; Jeffrey G.	Kyle	TX		
Allen; Thomas M.	Austin	TX		
Stevens; H. Adam	Austin	TX		

US-CL-CURRENT: 438/622; 257/E21.311, 257/E21.576, 257/E21.582, 438/756, 438/906

## ABSTRACT:

A metal etch processing sequence eliminates the need to use an organic masking layer solvent and etches a portion of an insulating layer after a plasma metal etching step. The etch of the insulating layer is performed with an etching solution that may include 1,2-ethanediol, hydrogen fluoride, and ammonium fluoride. The etching solution etches in a range of 100-900 angstroms of the insulating layer. The etch removes at least 75 percent of the mobile ions within the insulating layer, and should remove at least 95 percent of the mobile ions. The process may be implemented using an acid hood, an acid compatible spray tool, or a puddle processing tool. The process includes many different embodiments that allow the process to be easily integrated into many different existing processing sequences. A similar process may be used with a resist-etch-back processing sequence.

21 Claims, 12 Drawing figures  
Exemplary Claim Number: 1  
Number of Drawing Sheets: 5

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	RMC	Draw. De
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☐ 23. Document ID: US 5360748 A

L3: Entry 23 of 23

File: USPT

Nov 1, 1994

US-PAT-NO: 5360748

DOCUMENT-IDENTIFIER: US 5360748 A

TITLE: Method of manufacturing a semiconductor device

DATE-ISSUED: November 1, 1994

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Nadahara; Soichi	Tokyo			JP
Yamabe; Kikuo	Kanagawa			JP

US-CL-CURRENT: 438/476; 148/DIG.60, 257/E21.318, 438/143, 438/455, 438/58

## ABSTRACT:

A method of manufacturing a semiconductor device, which comprises the steps of providing a semiconductor substrate having a first primary surface which is designated to form the semiconductor device and a second primary surface opposite from the first primary surface, the substrate containing contaminants therein; forming a boron-doped layer on the second primary surface of the substrate; and absorbing the contaminants into the boron-doped layer.

11 Claims, 16 Drawing figures  
Exemplary Claim Number: 1  
Number of Drawing Sheets: 7



Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	RWC	Draw De
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WATER	1345970
((HYDROGEN FLUORIDE) SAME (AMMONIUM FLUORIDE) SAME (DEIONIZED WATER)).PGPB,USPT.	23

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**PALM INTRANET**

## Inventor Name Search Result

Your Search was:

Last Name = LEE

First Name = SANG-MI

Application#	Patent#	Status	Date Filed	Title	Inventor Name
<u>60463322</u>	Not Issued	159	04/17/2003	METHOD FOR MANUFACTURING MULTI-LAYER PCB	LEE, SANG-MIN
<u>29230153</u>	Not Issued	020	05/18/2005	ICON	LEE, SANG-MIN
<u>11193285</u>	Not Issued	020	07/28/2005	OBJECT-BASED STORAGE DEVICE WITH LOW PROCESS LOAD AND CONTROL METHOD THEREOF	LEE, SANG-MIN
<u>11158573</u>	Not Issued	020	06/22/2005	CASE FOR PORTABLE TERMINAL USING COLOR LIQUID CRYSTAL	LEE, SANG-MIN
<u>11132969</u>	Not Issued	030	05/19/2005	SWING HINGE DEVICE OF A PORTABLE TERMINAL	LEE, SANG-MIN
<u>11128913</u>	Not Issued	030	05/12/2005	SLIDING MODULE OF SLIDING-TYPE PORTABLE TERMINAL	LEE, SANG-MIN
<u>11126300</u>	Not Issued	030	05/11/2005	THIN FILM TRANSISTOR (TFT) AND FLAT DISPLAY PANEL HAVING THE THIN FILM TRANSISTOR (TFT)	LEE, SANG-MIN
<u>11104871</u>	Not Issued	020	04/12/2005	NEGATIVE ACTIVE MATERIAL FOR LITHIUM SECONDARY BATTERY AND NEGATIVE ELECTRODE AND LITHIUM SECONDARY BATTERY COMPRISING SAME	LEE, SANG-MIN
<u>11077377</u>	Not Issued	030	03/08/2005	NEGATIVE ACTIVE MATERIAL FOR A RECHARGEABLE LITHIUM BATTERY, A METHOD OF PREPARING THE SAME, AND A RECHARGEABLE LITHIUM BATTERY COMPRISING THE SAME	LEE, SANG-MIN

<u>11065888</u>	Not Issued	030	02/24/2005	NEGATIVE ACTIVE MATERIAL FOR A RECHARGEABLE LITHIUM BATTERY, A METHOD OF PREPARING THE SAME, AND A RECHARGEABLE LITHIUM BATTERY COMPRISING THE SAME	LEE, SANG-MIN
<u>11042330</u>	Not Issued	030	01/26/2005	NEGATIVE ACTIVE MATERIAL FOR A LITHIUM SECONDARY BATTERY, A METHOD OF PREPARING THE SAME, AND A LITHIUM SECONDARY BATTERY COMPRISING THE SAME	LEE, SANG-MIN
<u>11023445</u>	Not Issued	030	12/29/2004	APPARATUS FOR FIXING STATOR OF RECIPROCATING COMPRESSOR	LEE, SANG-MIN
<u>10981778</u>	Not Issued	030	11/05/2004	MULTI-LAYER PRINTED CIRCUIT BOARD AND FABRICATING METHOD THEREOF	LEE, SANG-MIN
<u>10962508</u>	Not Issued	030	10/13/2004	ETCHING COMPOSITION, METHOD OF PREPARING THE SAME, METHOD OF ETCHING AN OXIDE FILM, AND METHOD OF MANUFACTURING A SEMICONDUCTOR DEVICE	LEE, SANG-MI
<u>10921358</u>	Not Issued	030	08/19/2004	NEGATIVE ACTIVE MATERIAL FOR NON-AQUEOUS ELECTROLYTE BATTERY, METHOD OF PREPARING SAME, AND NON-AQUEOUS ELECTROLYTE BATTERY COMPRISING SAME	LEE, SANG-MIN
<u>10879203</u>	Not Issued	041	06/30/2004	ETCHANT FOR ETCHING NITRIDE AND METHOD FOR REMOVING A NITRIDE LAYER USING THE SAME	LEE, SANG-MI
<u>10848168</u>	Not Issued	030	05/19/2004	NEGATIVE ACTIVE MATERIAL FOR RECHARGEABLE LITHIUM BATTERY, METHOD OF PREPARING SAME, AND RECHARGEABLE LITHIUM BATTERY COMPRISING SAME	LEE, SANG-MIN
<u>10803833</u>	Not Issued	030	03/18/2004	CAMERA LENS UNIT IN A PORTABLE WIRELESS TERMINAL	LEE, SANG-MIN

<u>10774383</u>	Not Issued	030	02/10/2004	CLEANING SOLUTION AND METHOD OF CLEANING A SEMICONDUCTOR SUBSTRATE USING THE SAME	LEE, SANG-MI
<u>10769885</u>	Not Issued	020	02/03/2004	METHOD FOR INTERCONNECTING MULTI- LAYER PRINTED CIRCUIT BOARD	LEE, SANG-MIN
<u>10390017</u>	<u>6773159</u>	150	03/18/2003	NON-INVASIVE APPARATUS FOR MEASURING A TEMPERATURE OF A LIVING BODY AND METHOD THEREFOR	LEE, SANG-MIN
<u>10283335</u>	<u>6816123</u>	150	10/30/2002	CONTACT TYPE ANTENNA APPARATUS	LEE, SANG-MIN
<u>10238743</u>	Not Issued	041	09/09/2002	COMPOSITION FOR FORMING COATING LAYER AND FLAT MONITOR PANEL FOR DISPLAY DEVICE HAVING COATING LAYER PREPARED FROM THE SAME	LEE, SANG-MIN
<u>10224427</u>	Not Issued	161	08/21/2002	METHOD FOR MANUFACTURING THIN FILM	LEE, SANG-MIN
<u>10073045</u>	<u>6881357</u>	150	02/12/2002	TRANSPARENT CONDUCTIVE LAYER AND IMAGE DISPLAY DEVICE EMPLOYING THE SAME	LEE, SANG-MIN
<u>10029232</u>	<u>6735469</u>	150	12/28/2001	APPARATUS AND METHOD FOR OBTAINING DATA FOR DIAGNOSING CONDITION OF LIVING BODY USING UHF SIGNAL	LEE, SANG-MIN
<u>09962327</u>	<u>6489214</u>	150	09/26/2001	METHOD FOR FORMING A CAPACITOR COMPRISING ALUMINUM OXIDE FORMED BY ATOMIC LAYER DEPOSITION (ALD)	LEE, SANG-MIN
<u>09921001</u>	<u>6814508</u>	150	08/03/2001	METHOD OF AND APPARATUS FOR SETTING AND ADJUSTING A PRINT LOCATION OF A PRINTER	LEE, SANG-MIN
<u>09475157</u>	<u>6421554</u>	150	12/30/1999	METHOD AND DEVICE FOR DETECTING FAULT OF LEAD IN ELECTROCARDIOGRAM SYSTEM	LEE, SANG-MIN
<u>09454726</u>	<u>6615025</u>	150	12/04/1999	DUAL-MODE	LEE, SANG-MIN

				COMMUNICATION SYSTEM AND VOICE SIGNAL PROCESSING METHOD OF THE SAME	
<u>09414526</u>	Not Issued	061	10/08/1999	METHOD FOR MANUFACTURING THIN FILM	LEE, SANG-MIN
<u>09413767</u>	<u>6385578</u>	150	10/07/1999	METHOD FOR SUPPRESSING ANOYING DECODING NOISE IN ENHANCED VARIABLE RATE CODEC (EVRC) DURING ERROR PACKET PROCESSING	LEE, SANG-MIN
<u>09371709</u>	<u>6270572</u>	150	08/09/1999	METHOD FOR MANUFACTURING THIN FILM USING ATOMIC LAYER DEPOSITION	LEE, SANG-MIN
<u>09332698</u>	<u>6434387</u>	150	06/14/1999	METHOD FOR CONTROLLING HANDOFF IN MOBILE COMMUNICATIONS SYSTEMS	LEE, SANG-MIN
<u>09292759</u>	Not Issued	161	04/14/1999	CAPACITOR WITH ALUMINA/ ALUMINUM NITRIDE COMPOSITE DIELECTRIC FILMS GROWN BY ATOMIC LAYER EPITAXY AND MANUFACTURING METHOD THEREOF	LEE, SANG-MIN
<u>09252836</u>	Not Issued	161	02/19/1999	INTEGRATED CIRCUIT MEMORY DEVICES HAVING IMPROVED ELECTRICAL INTERCONNECTS THEREIN	LEE, SANG-MIN
<u>09226006</u>	<u>6335240</u>	150	01/06/1999	CAPACITOR FOR A SEMICONDUCTOR DEVICE AND METHOD FOR FORMING THE SAME	LEE, SANG-MIN
<u>09220230</u>	<u>6161022</u>	150	12/23/1998	METHOD OF ADJUSTING A SIZE OF A BASE TRANSCEIVER STATION SEARCH WINDOW	LEE, SANG-MIN
<u>09153358</u>	Not Issued	161	09/15/1998	METHOD OF MANUFACTURING A THIN FILM	LEE, SANG-MIN
<u>09127353</u>	<u>6144060</u>	150	07/31/1998	INTEGRATED CIRCUIT DEVICES HAVING BUFFER LAYERS THEREIN WHICH CONTAIN METAL OXIDE STABILIZED BY HEAT TREATMENT UNDER LOW TEMPERATURE	LEE, SANG-MIN

<u>08948566</u>	<u>5879982</u>	150	10/10/1997	METHODS OF FORMING INTEGRATED CIRCUIT MEMORY DEVICES HAVING IMPROVED ELECTRICAL INTERCONNECTS THEREIN	LEE, SANG-MIN
<u>08894706</u>	<u>5891567</u>	150	08/29/1997	POLYESTER FILAMENTARY YARN, POLYESTER TIRE CORD AND PRODUCTION THEREOF	LEE, SANG-MIN
<u>08862264</u>	<u>6101404</u>	150	05/23/1997	OPICAL DIAGNOSIS POINT DETECTOR FOR NONINVASIVE DIAGNOSIS OF BLOOD CONSTITUENTS & NONINVASIVE DIAGNOSTIC DEVICE	LEE, SANG-MIN
<u>08718670</u>	<u>5743939</u>	150	09/24/1996	WASTE GAS PROCESSING APPARATUS AND METHOD FOR SEMICONDUCTOR FABRICATING EQUIPMENT	LEE, SANG-MIN

Inventor Search Completed: No Records to Display.

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